

## **REMARKS**

Prior to this Reply, Claims 1, 3, 4, 6-11, 16, 18, 20-27, 29, 33-35 and 38-50 were pending. Through this Reply, Claims 11, 16, 27, 33 and 43 have been amended. Claims 51 and 52 have been added. No claims have cancelled. Accordingly, Claims 1, 3, 4, 6-11, 16, 18, 20-27, 29, 33-35 and 38-52 are now at issue in the present case.

### **I. Allowable Subject Matter**

Applicant notes, with thanks, that the Examiner has indicated that Claims 1, 3, 4, 6-11, 33-35, 38-42 and 44-50 are allowed. Applicant has amended Claim 11 to correct an obvious grammatical error. Furthermore, Claims 33 has been amended to correct a typographical error.

### **II. Rejection Under 35 U.S.C. § 102(e)**

The Examiner rejected Claims 16, 18, 20-27 and 29 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,643,088 to Kawachi (hereinafter “Kawachi”).

In response, Applicant has amended independent Claim 16 has been amended to require that the VCM and sense resistor voltages are measured “through separate reference voltage paths.” A similar limitation is found in allowed Claim 48. Applicant has also amended Claim 16 to delete a limitation that was added in response to the last Office Action. Such limitation now appears in new Claim 51.

In view of the above, Applicant submits that Claim 16, and the claims that depend therefrom, are patentably distinguishable from Kawachi.

Further, independent Claim 27 has been amended to include the following language: “wherein the VCM and sense resistor voltage measurements are calibrated at power-up.” A

similar limitation is found in allowed Claim 1. Applicant has also amended Claim 27 to delete a limitation that was added in response to the last Office Action. Such limitation now appears in new Claim 52.

In view of the above, Applicant believes that Claim 27, and the claims that depend therefrom, are patentably distinguishable from Kawachi.

### **III. Rejection Under 35 U.S.C. § 112**

The Examiner rejected Claim 43 under 35 U.S.C. § 112, first paragraph, as failing to comply with written description requirement. Specifically, the Examiner found that the claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

The Examiner noted that Claim 43 sets forth a microprocessor that selects between a PWM technique and an IR cancellation technique. The Examiner further stated that the specification describes both techniques, but a selecting process performed by the microprocessor is not adequately disclosed. The Examiner indicated that it appears that the disclosure only supports using one or the other technique, not that a selection between the techniques is made by the microprocessor.

In response, Claim 43 has been amended to require the step of “calculating the back emf voltage using the measured VCM and sense resistor voltages, wherein the back emf voltage may be calculated using either a PWM technique or an IR cancellation technique, wherein both techniques are available for calculating the back emf voltage without implementing two distinct

sets of hardware.” Applicant believes that support is provided for the above-quoted limitation and that the limitation is not disclosed by the cited references.

According to the specification, the present invention provides a system and method for controlling a transducer head velocity during a ramp load/unload. In contrast to the prior art, such a method and system may employ either a PWM technique or an IR calibration technique, to measure the back emf voltage without the need for hardwiring a specific measurement technique or making multiple system calibrations prior to operation of the disk drive (see, e.g., page 4, lines 23-27).

In one example implementation, a microprocessor 390 (FIG. 3) in a controller 300 may employ either a PWM technique or an IR calibration technique to determine the back emf voltage  $V_{\text{bemf}}$  (e.g., p. 7, line 18 to p. 8, line 2). The microprocessor 390 is configured to utilize either a PWM technique or an IR calibration technique to determine the  $V_{\text{bemf}}$ . Notably, in the example controller in FIG. 3, it is the ability of the microprocessor 390 to use either a PWM technique or a IR cancellation technique, *without* the need for hardwiring a specific measurement technique or making multiple system calibrations prior to operation of the disk drive, which is an advantage of the present invention over the prior art (see, p. 3, line 18 to p. 4, line 27).

In the prior art, hardware had to be specifically designed for either the PWM or IR cancellation techniques. If both techniques were needed for a particular application, two distinct sets of hardware had to be implemented, possibly increasing the overall cost of the system. Further, during the implementation of the measurement techniques, a decision as to which technique would be employed needed to be made prior to any voltage measurements, thereby greatly reducing the system flexibility (p. 4, lines 13-19).

In view of the amendments to Claim 43 and the reasons provided above, Applicant respectfully submits that rejection of Claim 43 has been overcome. Accordingly, Applicant submits that Claim 43 is in condition for allowance.

#### **IV. Additional Claim Fees**

In determining whether additional claim fees are due, reference is made to the Fee Calculation Table (below).

**Fee Calculation Table**

	Claims Remaining After Amendment		Highest Number Previously Paid For	Present Extra	Rate	Additional Fee
Total (37 CFR 1.16(c))	38	Minus	42	= 0	x \$18 =	\$ 0.00
Independent (37 CFR 1.16(b))	7	Minus	7	= 0	x \$86 =	\$ 0.00


As set forth in the Fee Calculation Table (above), Applicant previously paid claim fees for forty-two (42) total claims and for seven (7) independent claims. Accordingly, Applicant believes that no other fees are due. Nevertheless, the Commissioner is hereby authorized to charge Deposit Account No. 50-2198 for any fee deficiencies associated with filing this paper.

#### **V. Conclusion**

Applicant believes that the application appears to be in form for allowance. Accordingly, reconsideration and allowance thereof is respectfully requested.

The Examiner is invited to contact the undersigned at the below-listed telephone number regarding any matters relating to the present application.

Respectfully submitted,



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